

GPS GARP0102-501 (11841) Online Physical Geography and Laboratory

Geography Planning Sustainability: Fall 2020 Core Lab Science Four (4) credit-hours.

WSU CGCE College of Graduate and Continuing Education

Instructor: Senior Adjunct Prof. Sean M. Fitzgerald MS PhD-ABD

Best Practice: Text 413 626 3713 24/7 or E-MAIL: sfitzgerald@westfield.ma.edu

Fall 2020 Special Edition! Remote-Site CIT-GEE0 teaching from SE Asia-Philippines. Case-studies, lab demonstrations; videos and maps-data will provide exemplars for student Theme Evaluation Templates. US-PHL Students can network on Evaluations!*

Physical Geography is the survey of the spatial variations of the physical phenomena on the surface of the Earth. After an Introductory (Map-Use-Methods) Theme, it focuses on the Environmental Spheres of the Earth or the four themes of the major “Earth Systems” and their interactions: Lithosphere (Internal Earth Landforms Soil); Hydrosphere (Oceans and Rivers); Atmosphere (Climate and Weather); Biosphere (Biomes, Flora, Fauna). Ecology or human-environmental interaction is also emphasized across Themes. Web and student-local field labs-experiments will include map-use, geo-data collection, processing, and interpretation-analysis; as well as basic Geographic Information Systems concepts. No prerequisite.

Format: Course consists of FIVE Theme Evaluations (each of 5-Steps; which includes a M/C Test | Definitions, Map Features | Concept Graphics Exercise, Short Answer Questions, a brief Research Assignment, and a “Lab” assignment), and a Final Report, each worth 100-points. The lowest Theme 2-5 Evaluation score is dropped from the final score. **All Theme Evaluations follow the same format** with an Instructions PDF and Submission Template Power Point. Students select a course Research Region and Country of interest for their evaluations. There are two optional live sessions per week, and an optional Discussions forum.

Text: USED from WSU Bookstore or **Online Vendor (5-15 Dollars)**

12th Edition or 11th Edition or 10th Edition or 9th Edition
McKnight's Physical Geography: A Landscape Appreciation,
Darrel Hess, City College of San Francisco
Dennis G. Tasa, Illustrator
© 2017-2011 Pearson

NOTE: There is no Lab Manual Required

Grading: Plus and minus grades are determined at end of semester.

500 total points.

A = 450 + points
B = 399 - 449 points
C = 348 – 398 points
D = 297 - 347 points

Week	Dates	Chap	Theme/Topic	Theme Evaluation	Lab	Lab Topic
Week 1	9/2	C 1	TH 1 Introduction		L01	Tools Methods
Week 2		C2	Portraying Earth			
Week 3	<u>9/18</u>	C14	TH 2 Lithosphere Internal Processes	<u>Theme 1 Evaluation</u>	L02	EQ VOL Maps-Data
Week 4		C13	Geomorphology Landforms			Soils Classification
Week 5		C12	<i>Pedology Soils</i>			
Week 6	<u>10/9</u>	C9	TH 3 Hydrosphere Oceanography	<u>Theme 2 Evaluation</u>	L03	Ocean-Stream Measurement
Week 7		C16	Fluvial Systems Floods			
Week 8	<u>10/23</u>	C8	TH 4 Atmosphere <i>Climate Change</i>	<u>Theme 3 Evaluation</u>	L04	Climate Classification
Week 9		C3	Atmosphere Weather			Weather Measurements
Week 10		C4-6	Insolation and Temperature Pressure and Moisture			Radar Satellite
Week 11			Risk Assessment			Environmental Hazards
Week 12	<u>11/13</u>	C10	TH 5 Biosphere <i>Biomes</i>	<u>Theme 4 Evaluation</u>	L05	Biome Classification
Week 13		C11	Flora Fauna			
Week 14			<i>Ecology & Conservation SE Asia Case Study</i>			Insular Equatorial Environments
Week 15	<u>12/17</u>			<u>Theme 5 Evaluation</u>		
	<u>12/23</u>		Final Report Due			All work due

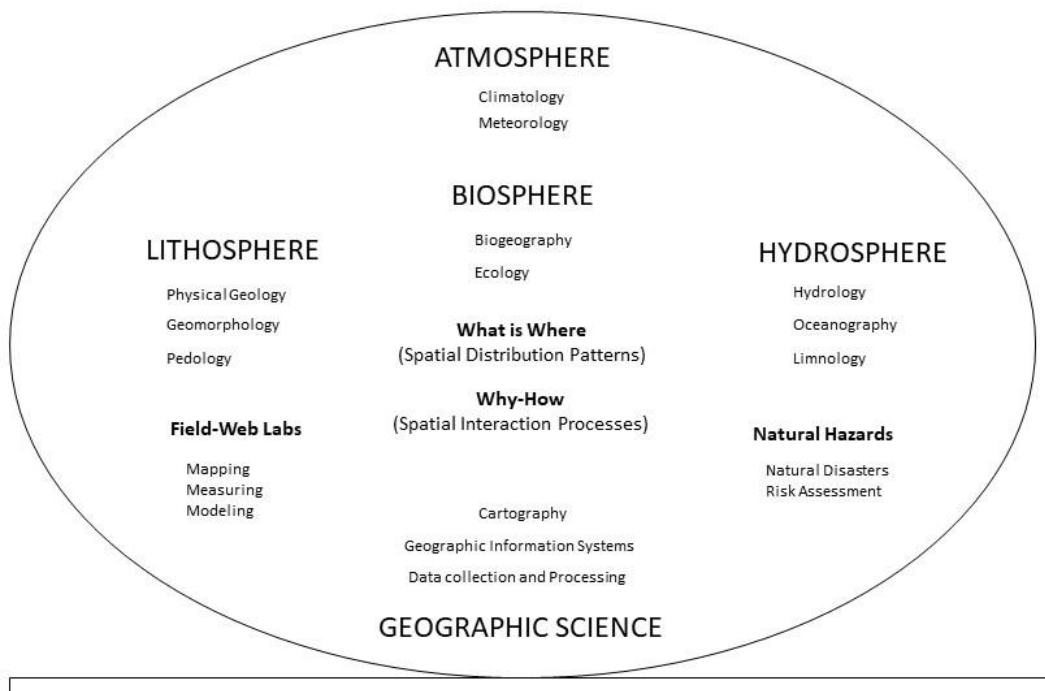
Italic Topics are connected (Soils-Biomes-Climate) Underline Due-Date. Flexible Theme Schedule.

Theme Evaluations 1-5 each have 5 Steps:

- Step 1: Multiple Choice Questions and Definitions (10-15)
- Step 2: Physical Map Features and Concept Graphics (Variable)
- Step 3: Short-Answer Critical Thinking Research Questions (1-2)
- Step 4: Brief Theme Research Region-Country Profile Essay
- Step 5: Web-Local Laboratory Assignment

*Final Report is a regional-country physical geography profile; and is NOT subject to “drop” and counts as the course “Final Exam”. Generally the report is combining Theme Evaluation 2-5 Step 4 Essays; with connecting and summary materials.

Physical Geography (Geosystems or Earth Systems Science)



Physical Geography: Conventionally the branch of natural science which deals with the study of spatial processes and patterns in the natural environmental spheres; such as the lithosphere, hydrosphere, atmosphere, and biosphere. Includes fundamentals of Geography (Map Use, Geo-Informatics), and reciprocal relationships between the environment and humans.

https://en.wikipedia.org/wiki/Physical_geography

https://en.wikipedia.org/wiki/Portal:Earth_sciences

*** WSU-UPM GEE0 Program: Online Academic Exchange through WSU Center for Instructional Technology (CIT), College of Arts, Humanities and Social Sciences (CAHSS), College of Graduate and Continuing Education (CGCE), GPS Department, and the University of the Philippines Mindanao (UPM), College of Science and Mathematics (CSM). Optional Participation. SEE PLATO WSU-UPM Exchange Portal.**

WEB-LOCAL ONLINE LABS Fall 2020: Overview

- There are 5 Lab Assignments, one for each course theme.
- For each of the five Lab Assignments there are several Lab SUPPORT-TUTORIAL VIDEOS.
- Theme Lab Assignment (Theme Evaluation Step 5) Instructions are included in the Theme Evaluation Instructions PDF.
- Text responses, data, maps, photos, observations will all be recorded in Step 5 of the Theme Evaluation Submission Template Power Point.

LAB TOOLS USED IN STUDENT LOCAL LABS:

Smart Phone with:

- Map GPS App
- Camera
- Notes and Spreadsheet Optional

LAB TOOLS USED IN STUDENT WEB LABS:

- Personal Computer w/Internet Access to Online Mapping Applications.
- EXCEL* Software or similar (Google Sheets).
- Power Point* and/or Word* or similar (KeyNote | Google Slides).
- Adobe Acrobat Reader (PDF)

*Microsoft Office 365 (Word, Excel, Power Point) is FREE for students! Contact WSU CIT

- Students may photograph completed map-diagrams (Theme Evaluation Step 2 and/or Step 5) and insert picture (jpeg) into Template Step 5.

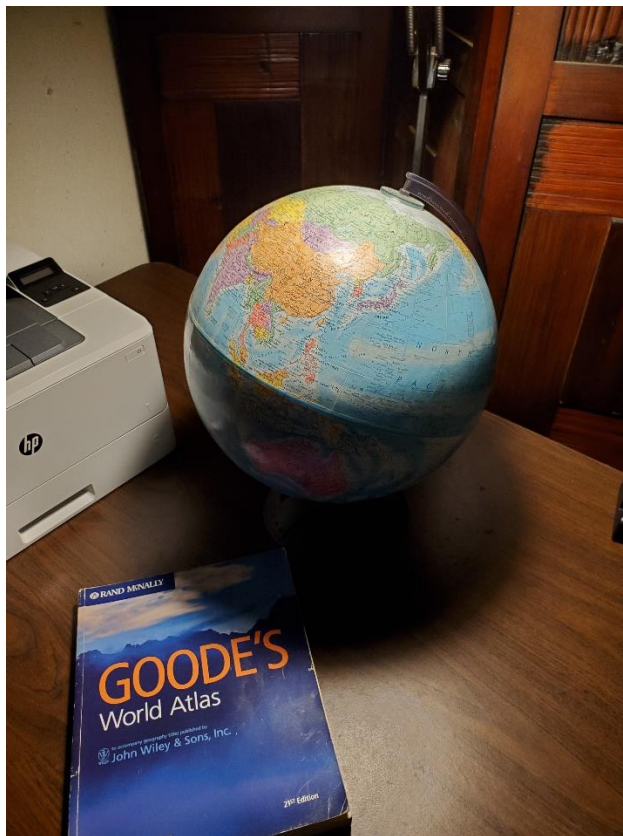
Each of the 5 Labs will also have a standard geographic field and software tools DEMONSTRATION VIDEO

- Using-Demonstrating some professional geographic lab tools
- Using-Demonstrating professional geographic software
 - Tools which students generally would-could not access outside an in-person lab setting.
- Excel
- ArcGIS 10.8 ArcGIS Pro
- RockWorks20
- Idrisi TerraSet20
- Google Earth Pro
- Stella Architect 2 Modeling
- Mathematica 12
- GPS Units Map and Compass
- Weather Station
- Geologic Tools and Sampling
- Soil Testing Kit
- Bio-sampling Forestry Tools
- Site Measures and Gridding

This Ends the Basic Syllabus and Schedule

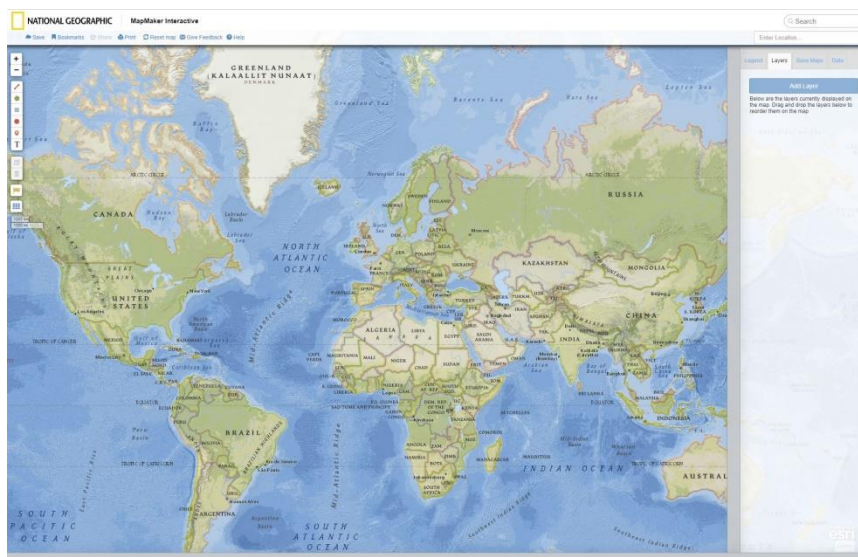
Reference Supplement (Part) to Syllabus and Schedule

Traditional Geographic Reference; Globe and Atlas.



Contemporary Web Map and GIS Tools:

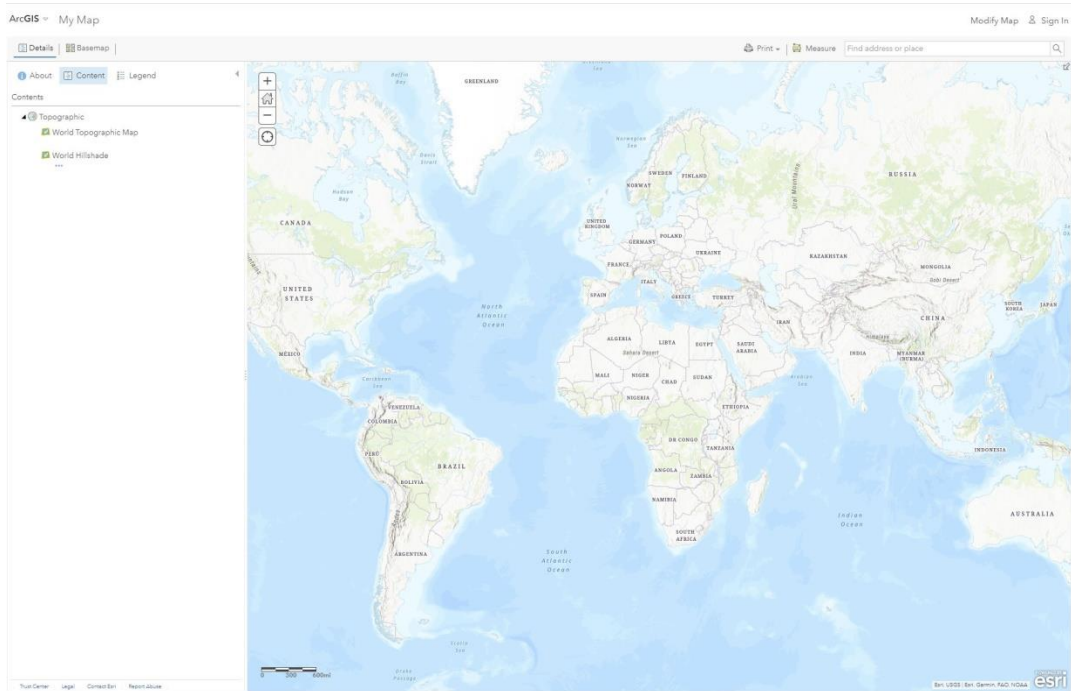
<http://mapmaker.nationalgeographic.org/> Thematic World Atlas



<https://www.google.com/earth/> Global Imagery and Maps



<https://www.arcgis.com/home/webmap/viewer.html> ArcGIS Online Public Map Viewer

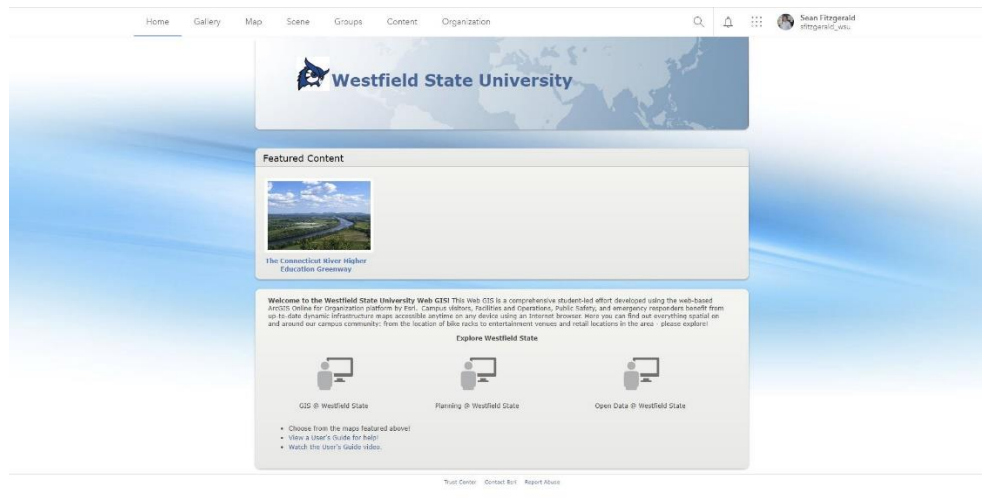


Create a Public ArcGIS Online Account:

https://www.arcgis.com/sharing/rest/oauth2/signup?client_id=arcgisonline&redirect_uri=http://www.arcgis.com&response_type=token

Living Atlas: <https://livingatlas.arcgis.com/en/home/>

Log-In to your WSU-GPS (GARP) Organization ArcGIS Online Account



WSU GPS ArcGIS Online Home Page

<https://westfield.maps.arcgis.com/home/index.html>

- All Students are provided with UN/PW for access to our **WSU GPS Department Organizational ESRI ArcGIS Online Web Application**. There is a Group dedicated to our course. Instructor may provide guidance for accessing Gallery and Group Maps for use in Theme Evaluations. This Organizational version has enhanced features!